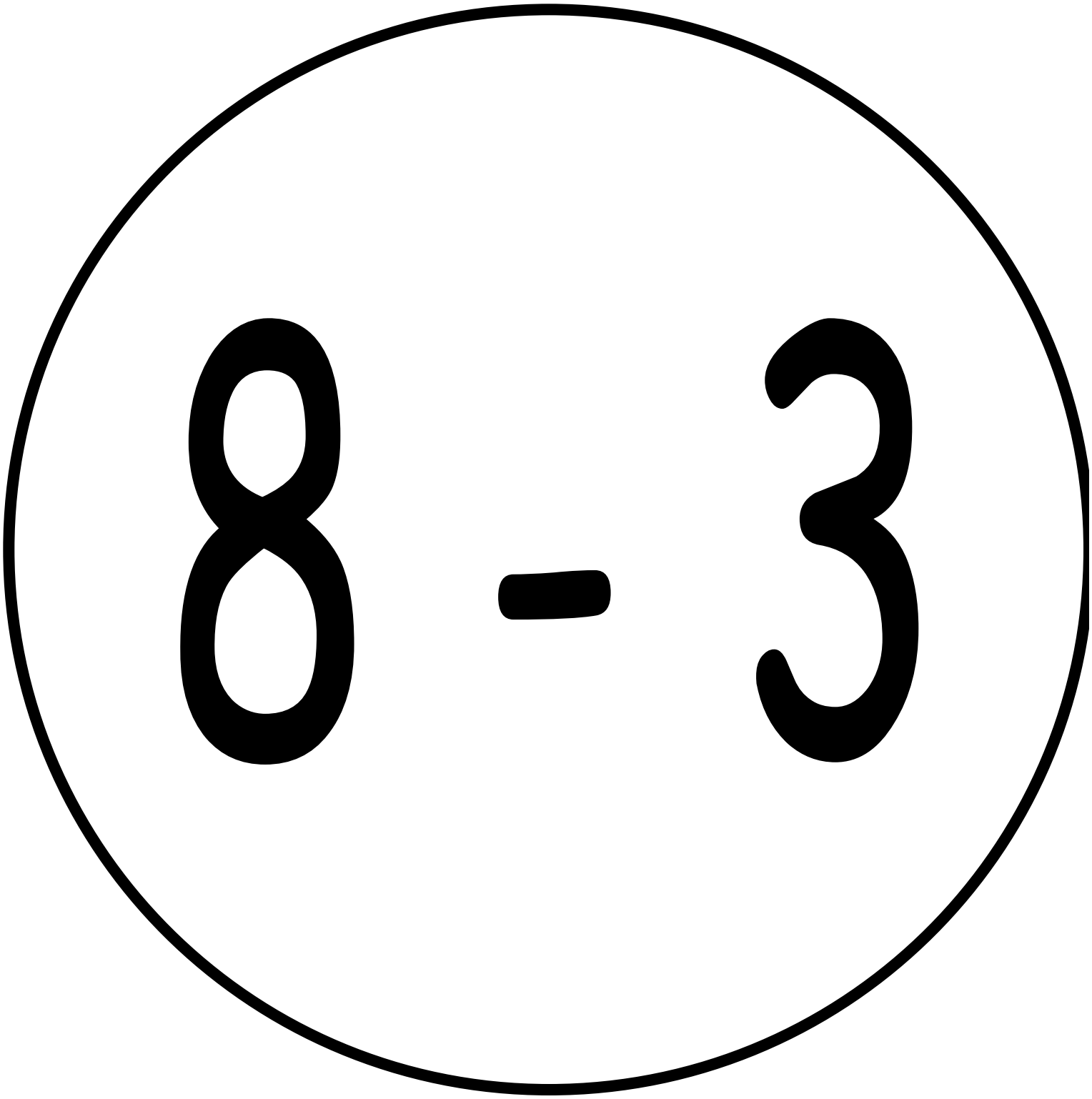
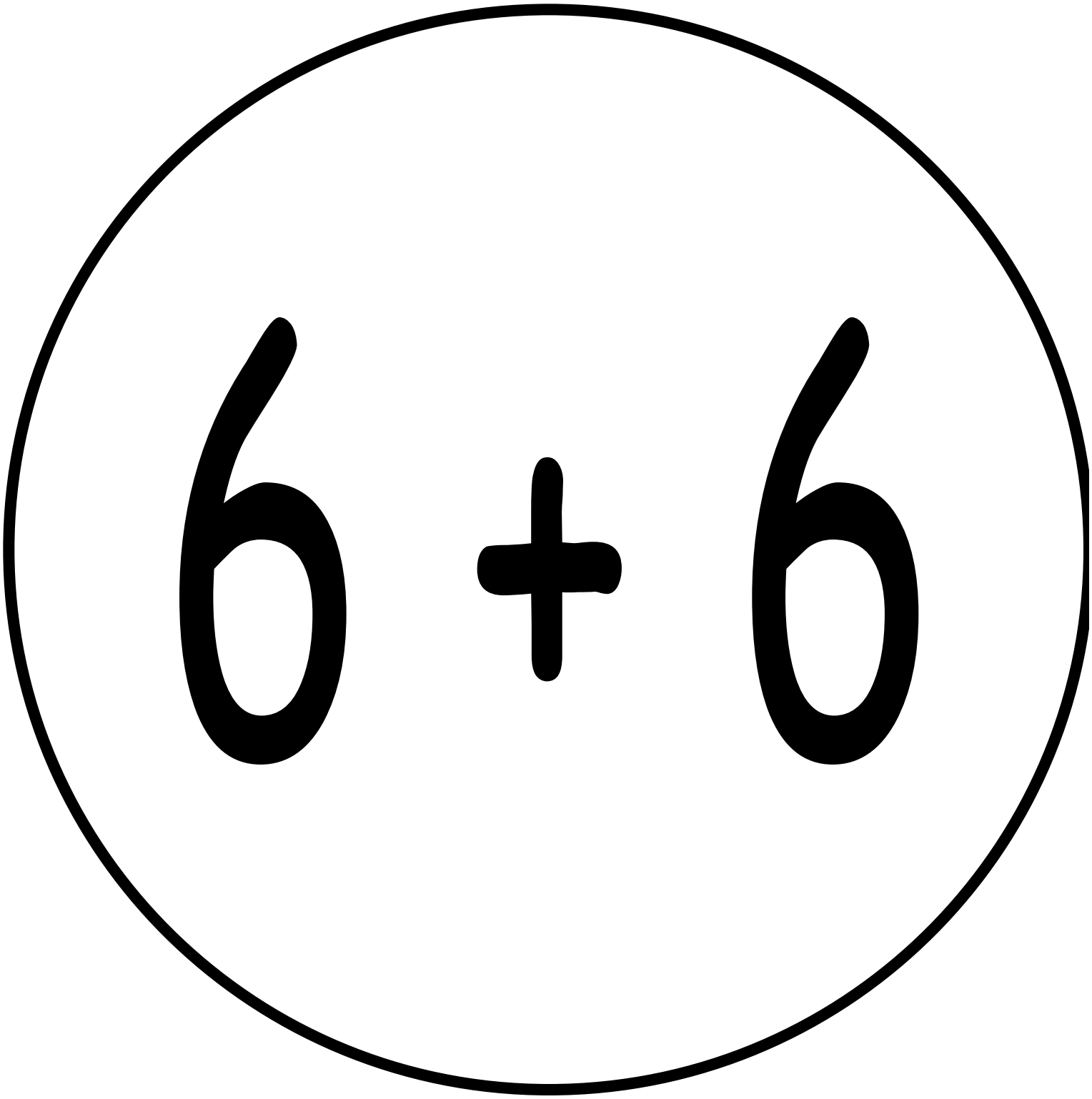
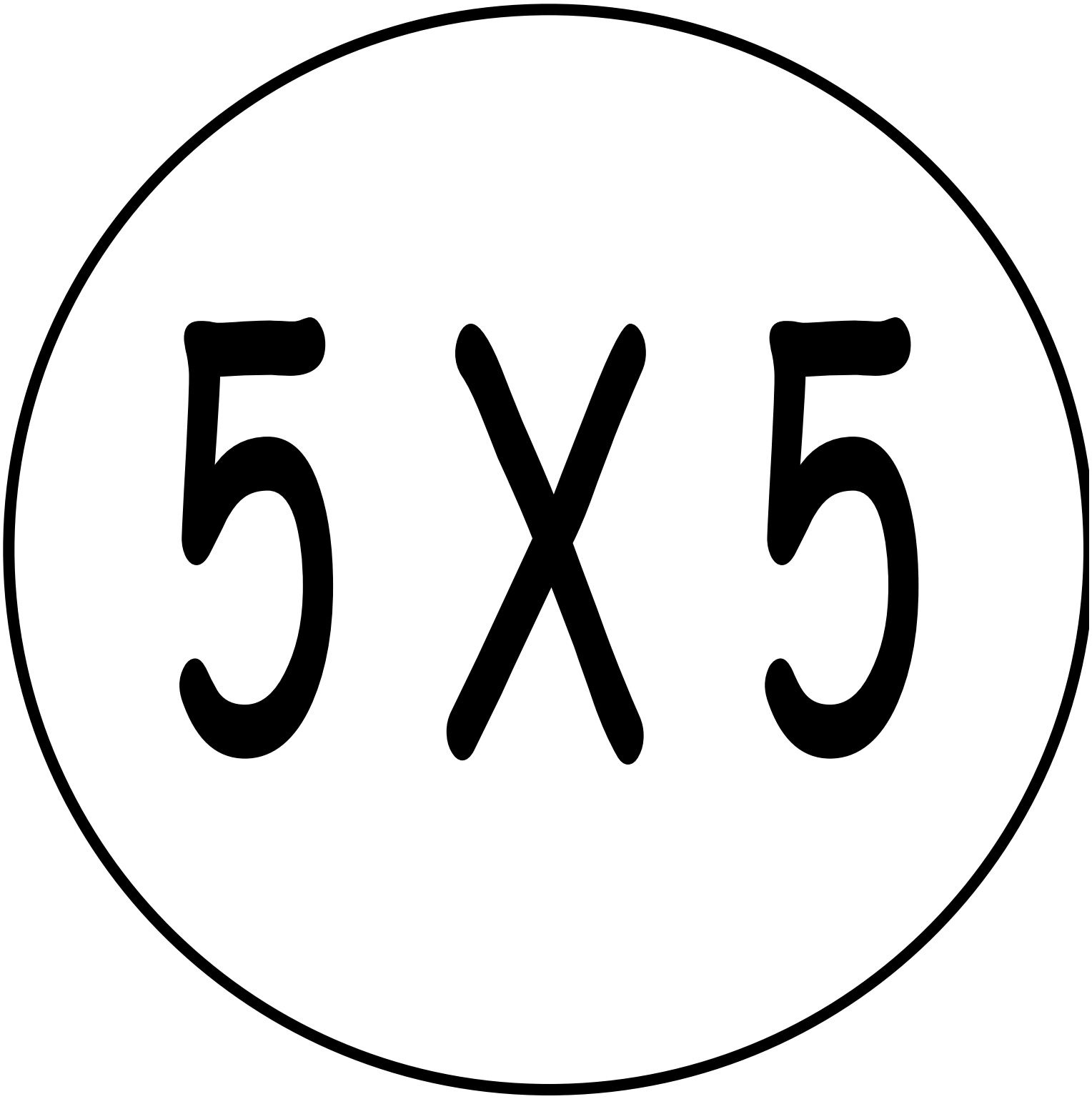
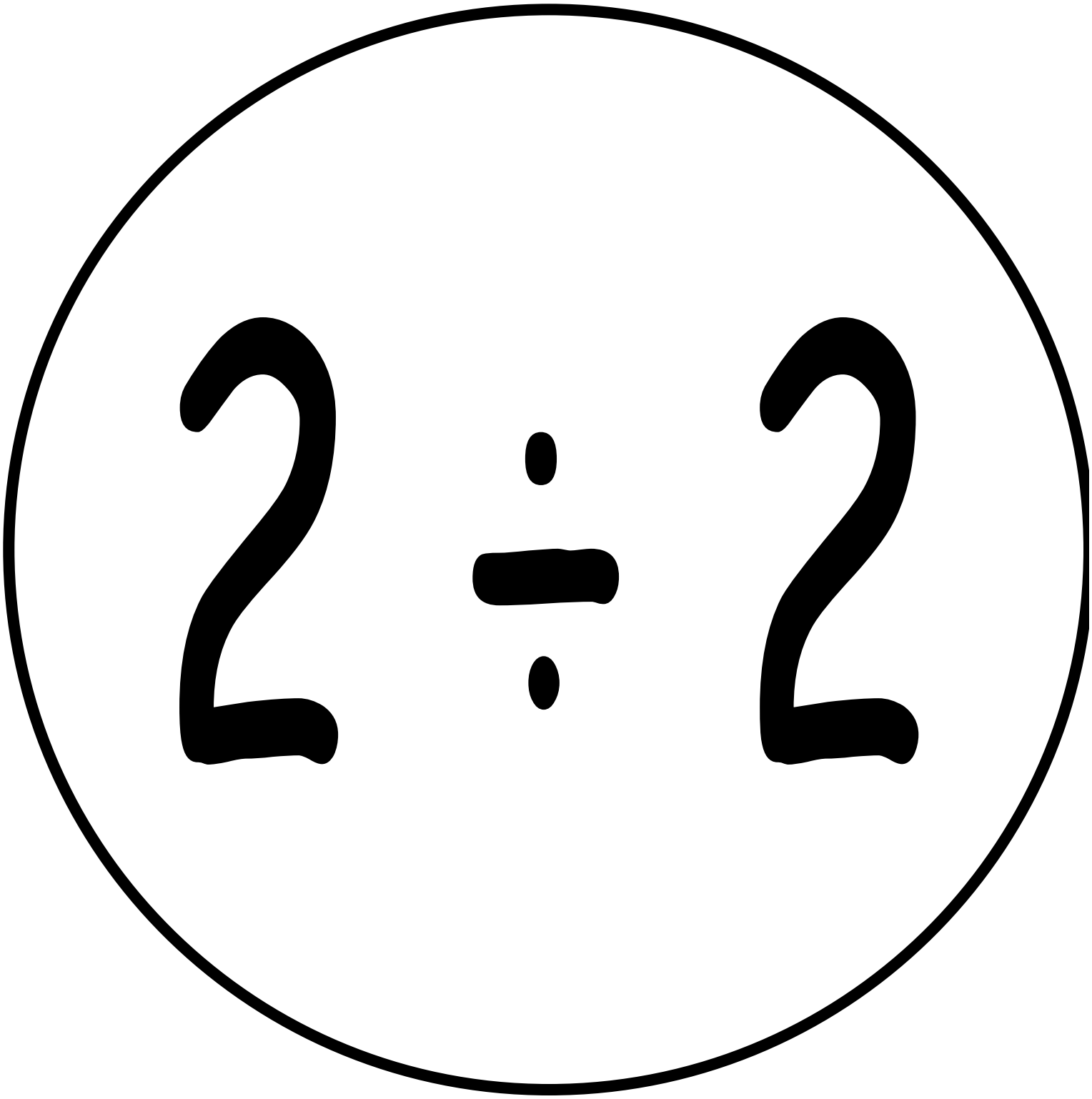
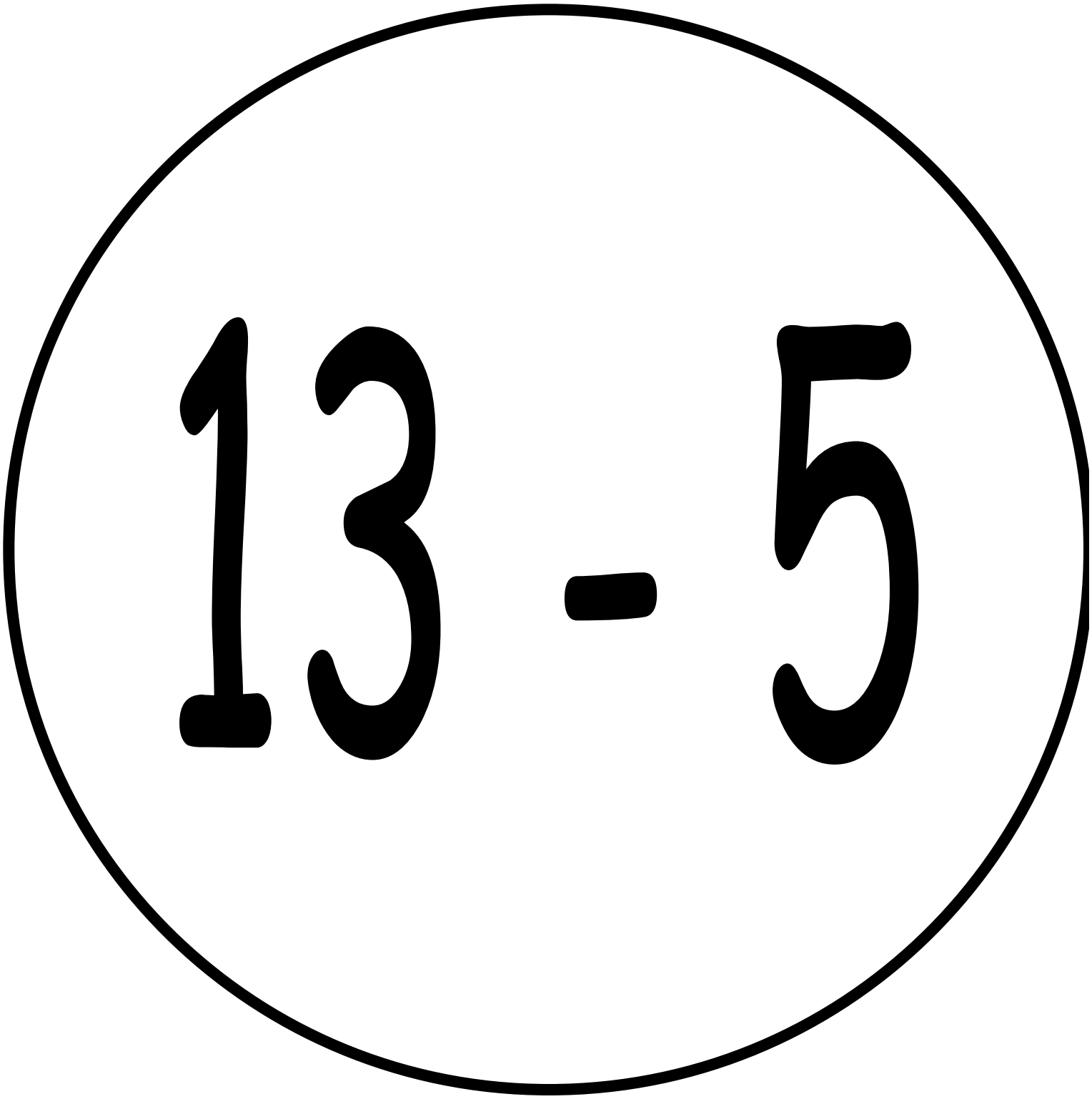
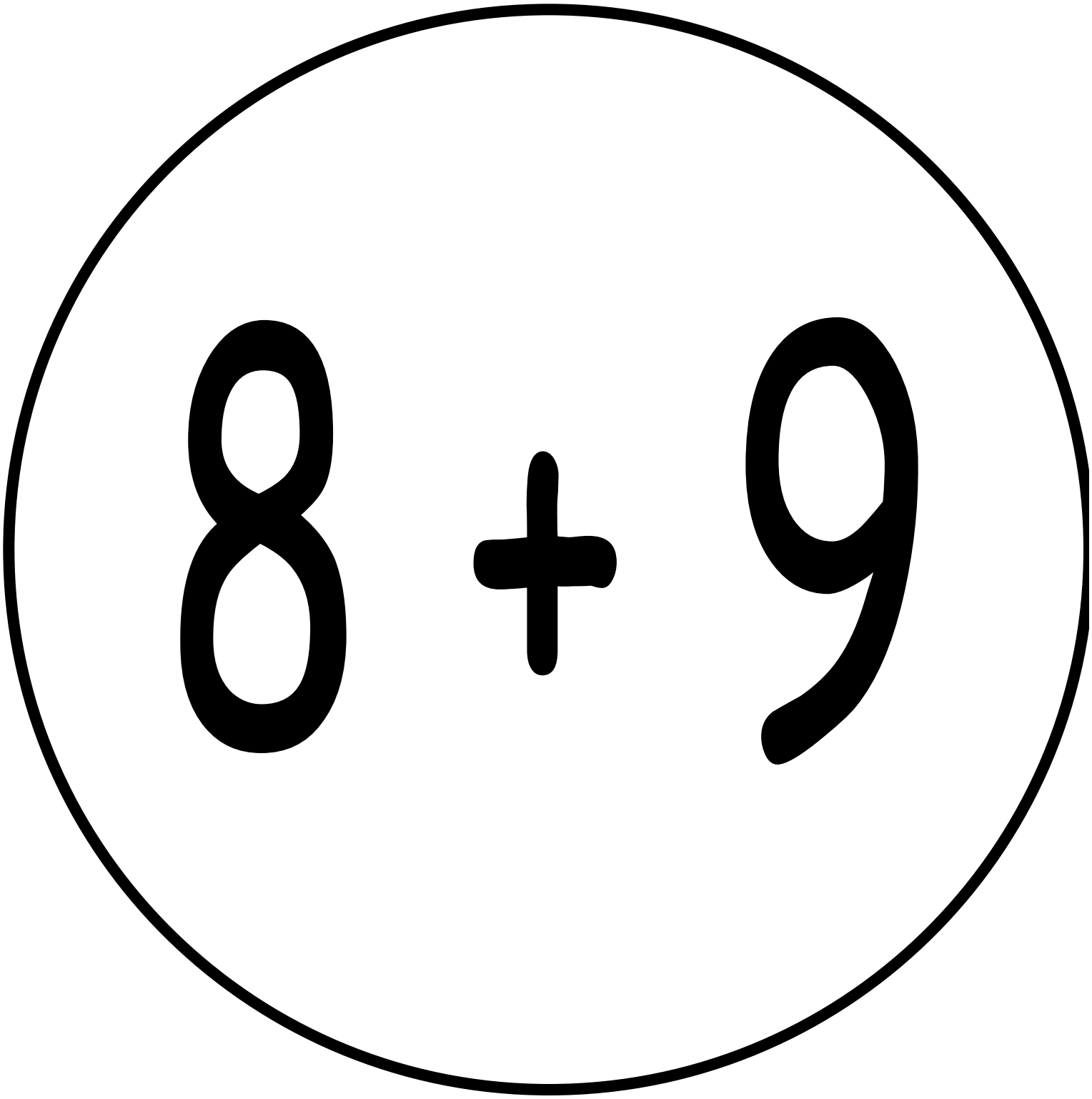

8 - 3


6 + 6


5 X 5


2 ÷ 2


13 - 5


8 + 9

3
-10
2
x
3

4 + 5 × 3

2
x
-1-
3

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4
+
7
×
7

4×3

$\cdot 1 \cdot$

9

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5
x
10
-1-
2

8

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3

×

4

9
+
9
10
3

1 x
5 x
5

2
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2
×
10

٣ × ٣
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8
+
9
×
1

$$3 - 1 - (2 \times 3) + 4$$

9
+
4
+
5
×
3

$$2 \times (5 - 1 - 3) + 9$$

٦٥
٥ × ٣
١٠
٣

13
-
4
+
7
×
1

5
-
3 x 4
·1·
9

$$17 - 10 - (9 - 2) + 5$$

5
x
10
-1-
2
-1

5
+
3
1
2

5
+
3
1
2

$$3 - 4$$

$$8 - 3$$

$$\times$$

$$4$$

18
+
6
+
6
·1·
3

$$5 \times 5 - 1 \times 10$$

$$10 \times 2 \cdot 1 \cdot 2 + 54$$

$$3 \times 5 + 3 - 2$$

$$17 - 8 + 9 \times 1$$

Level 1 Answer Key:

Teacher Resource Number	Answer
Teacher Resource 1	6
Teacher Resource 2	9
Teacher Resource 3	5
Teacher Resource 4	15
Teacher Resource 5	11
Teacher Resource 6	12
Teacher Resource 7	7
Teacher Resource 8	5
Teacher Resource 9	4
Teacher Resource 10	5
Teacher Resource 11	12
Teacher Resource 12	25
Teacher Resource 13	1
Teacher Resource 14	8
Teacher Resource 15	17

Level 2 Answer Key

Teacher Resource Number	Answer
Teacher Resource 16	6
Teacher Resource 17	27
Teacher Resource 18	10
Teacher Resource 19	5
Teacher Resource 20	11
Teacher Resource 21	2
Teacher Resource 22	2
Teacher Resource 23	25
Teacher Resource 24	2
Teacher Resource 25	20
Teacher Resource 26	4
Teacher Resource 27	25
Teacher Resource 28	10
Teacher Resource 29	24
Teacher Resource 30	17

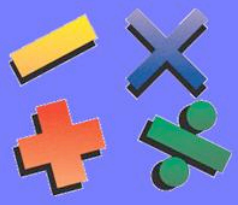
Level 3 Answer Key

Teacher Resource Number	Answer
Teacher Resource 31	10
Teacher Resource 32	36
Teacher Resource 33	16
Teacher Resource 34	14
Teacher Resource 35	2
Teacher Resource 36	13
Teacher Resource 37	7
Teacher Resource 38	15
Teacher Resource 39	8
Teacher Resource 40	14
Teacher Resource 41	22
Teacher Resource 42	15
Teacher Resource 43	55
Teacher Resource 44	5
Teacher Resource 45	10

But what happens when *all* of those operations are in the *same* math problem?

Next

There is a phrase we use to help us remember the order of operations...



Next

Pardon My Dear Aunt Sally!

Next

Pardon

1. Solve inside parentheses ( )

Next

For Example:

10 + (5 - 4) x 3

10 + 1 x 3

Next

My Dear

2. Multiply or Divide from left to right.

Next

For Example:

10 + (5 - 4) x 3

10 + 1 x 3

10 + 3

Next

Aunt Sally!

2. Add or Subtract from left to right.

Next

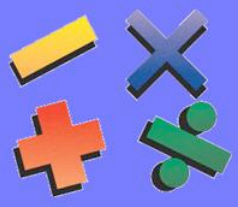
For Example:

$10 + (5 - 4) \times 3$

$10 + 1 \times 3$

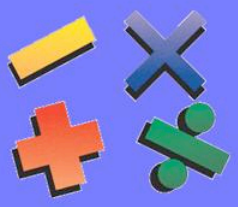
$10 + 3$

13



Next

Now it is your turn to try!



Next

What should I solve first in 5 x 3 – (2 + 2) ?

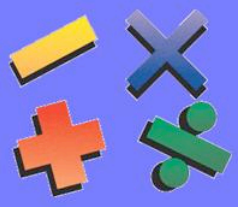
5 x 3	3 - 2
2 + 2	5 + 2

What should I solve first in 6 + 4 x 3?

4 x 3	6 + 4
6 + 3	10 x 3

Solve: (5 + 2) x 6

17	42
32	16



Solve: (20 + 2) - 6

8	12
10	16

Solve: 48 ÷ (8 - 2) + 4

8	12
10	17

Solve: 18 – (6 x 1) x 2

6	4
24	16

Good Job!

You now know a lot about the Order of Operations!

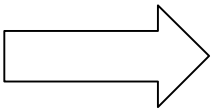
Teacher Resource 48
Classroom Chart for Display

Order of Operations

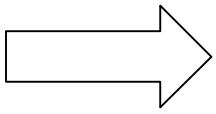
Pardon ( )

My Dear X or ÷

Left to Right



Aunt Sally + or -



Left to Right

BALANCE GAME

Directions:

4. **Ask students to stand and balance on one foot. (NO HOPPING)**

Generate discussion with the following questions:

- **How does it feel to stand on one foot?**
- **How do you know you are balanced?**
- **How do you know you are not balanced?**

5. **Ask students to balance on the opposite foot.**

6. **"Flamingo" – Students balance on one foot while placing the other foot against the opposite knee.**

"Flamingo" Balance Contest: On the signal "go", students perform the "Flamingo Balance". If a student removes his/her foot, hops, or any other off-balance movement, he/she must sit down. The remaining one, two, three, etc. students win the contest.

PEOPLE GAME

The purpose of this activity is to allow the students to develop an understanding of odd, even, equal and unequal.

Directions:

4. **Using the classroom area, divide the students into two different groups.**
5. **Divide the students evenly at first to generate a discussion of even and equal.**
6. **Next, divide the students using an odd number combination. Generate discussion about odd numbers and unequal.**

Sample Questions:

Tell me something you know about odd and even numbers?

Can odd numbers be separated evenly?

What must we do to make our class even? Odd? Equal? Unequal?

Name:_____

Part A

Solve the expression below using >, <, or =.

18 + 21 [=] 19 + 20

Students receive 1 point for correctly answering part A.

Part B

Use what you know about equivalent expressions to explain why your answer is correct. Use words, pictures, and/or numbers in your explanation.

Students receive a possible 2 points

Model Responses 1:

Equivalent is when 2 or more expressions (or number sentences) have the same amount.

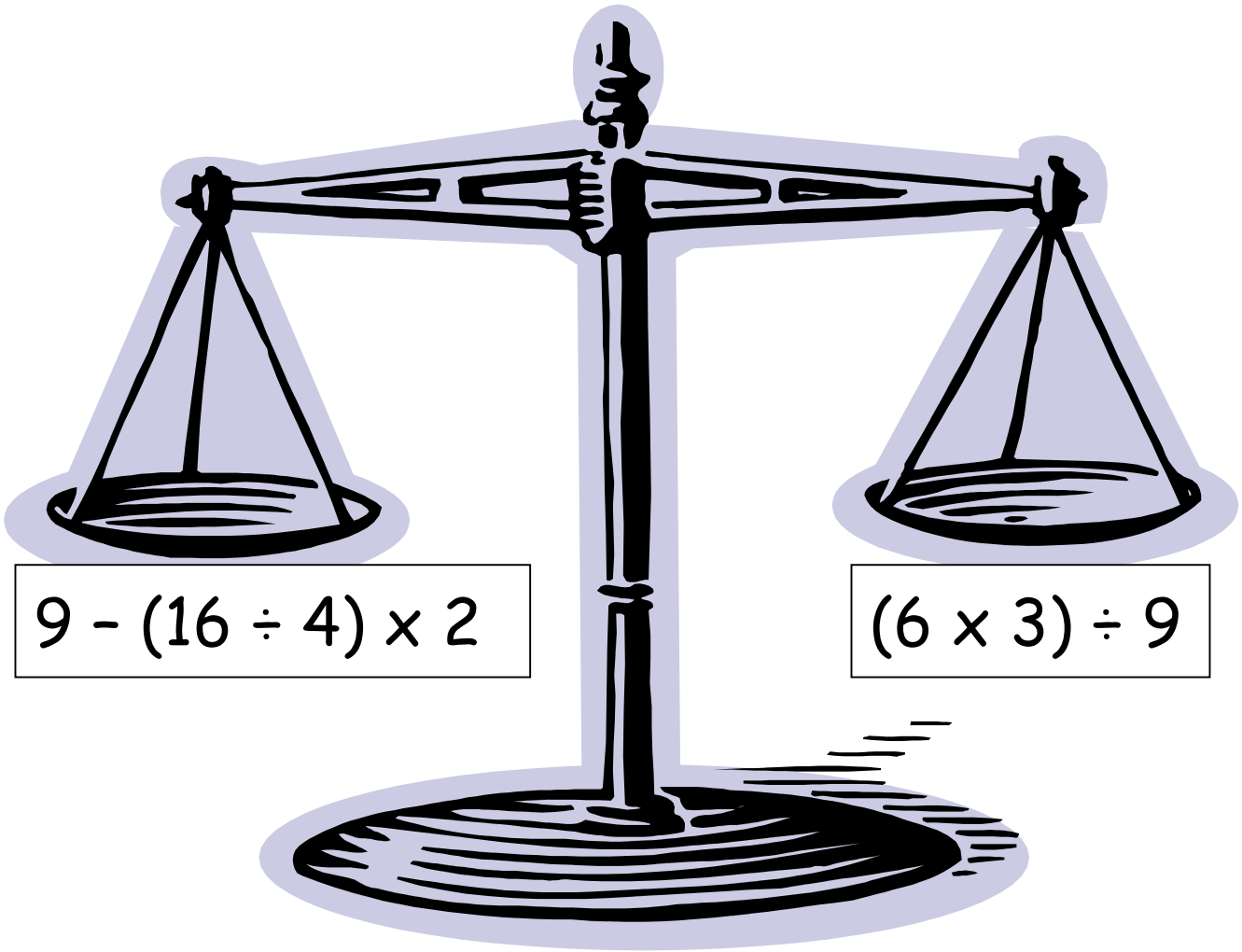
18 + 21 = 39 and 19 + 20 = 39

39 = 39 so the expressions are equivalent.

Model Response 2:

Equivalent: Same amount

18 + 21 = 39 19 + 20 = 39


9 – (16 ÷ 4) x 2
(6 x 3) ÷ 9

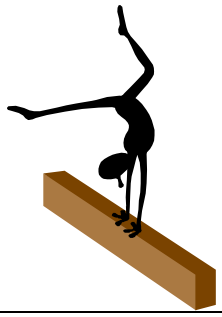
Teacher Resource 53a
Answer Key

8 + (4 x 5) – 3 25	1 + (6 x 5) – 6 25
18 ÷ 3 + 2 8	(8 x 8) – (7 x 8) 8
15 - 3 x 3 6	(20 + 16) ÷ 6 6
9 + (4 + 5) x 3 36	8 x 2 + 20 36
19 – (5 x 3) ÷ 3 14	10 + 4 – (5 x 0) 14
21 - (4 - 2) 19	5 + (7 x 2) 19
27 – (8 + 9) x 1 10	19 - (81 ÷ 9) 10

7 + 3 + (1 x 1) 11	7 + 6 x 2 – 8 11
(6 x 7) – 4 38	101 - (9 x 7) 38
75 - (12 ÷ 4) 72	8 + (8 x 8) 72
8 + (7 x 0) – 8 0	(5 ÷ 5) – 1 0
3 + 2 x 6 15	39 - (6 x 4) 15
9 + 6 x 3 27	(6 x 6) – 9 27
20 + 5 x 5 45	(5 x 4) + (5 x 5) 45

(7 x 7) + 3 52	58 – 3 x 2 52

Student Vocabulary Cards

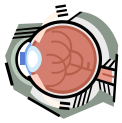
Order of Operations The order in which we solve a mathematical expression 4. Parentheses ( ) 5. Multiplication or Division from left to right 6. Addition or Subtraction from left to right	**Equivalent Equations** Two or more expressions that have the same amount.
Balance The act of having one or more things equal or steady. 	**Inequality** Two or more expressions that do <u>not</u> have the same amount.

Teacher Resource 55

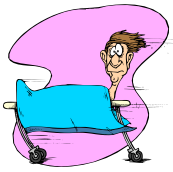
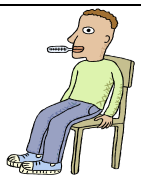
Operation Answer Key

You are the head doctor at the local hospital. There are many patients waiting to have surgery, but all of the patients' charts got mixed up and no one knows who is supposed to have which surgery.

7. Solve the expressions below on a separate piece of paper.
8. Cut out the expressions and glue them under their **equivalent** expressions to match the patient with his/her correct surgery.

heart surgery	lung surgery	foot surgery	bone surgery	eye surgery
				
17- (3 x 5) + 2	2 + 40 ÷ 8	6 x 2 + (3 x 1)	9 – 1 x 5	1 + (6 x 3)

Answer Key:

				
2 + (18 ÷ 9)	(4 + 3) x 1	(7 x 4) - 13	19 + 1 – (4x4)	2 + (5 x 3) + 2